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1	US 20030137964 A1	20030724	66	Satellite broadcasting system	370/342	
2	US 20030137963 A1	20030724	67	Satellite broadcasting system	370/342	370/320
3	US 6654340 B1	20031125	11	Differential OFDM using multiple receiver antennas	370/208	370/210; 375/267; 375/340

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1	Suenaga, Masashi et al.
2	Suenaga, Masashi et al.
3	Jones; Vincent K. et al.

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1	US 20030137964 A1	20030724	66	Satellite broadcasting system	370/342	
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1	Suenaga, Masashi et al.
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1	US 20050002440 A1	20050106	147	Vertical adaptive antenna array for a discrete multitone spread spectrum communications system	375/141	
2	US 20040264561 A1	20041230	52	Filter structure for iterative signal processing	375/232	
3	US 20040224725 A1	20041111	18	Wireless communication system and method using multiple antennas	455/561	455/562.1
4	US 20040213351 A1	20041028	103	Method and apparatus for transmitting signals having a carrier-interferometry architecture	375/260	
5	US 20040190599 A1	20040930	16	Apparatus and method for performing a demodulation operation based on transmit diversity in a mobile communication system	375/144	
6	US 20040185776 A1	20040923	18	Digital beacon asymmetry and quantization compensation	455/12.1	455/9
7	US 20040180627 A1	20040916	26	Code division multiple access wireless system with closed loop mode using ninety degree phase rotation and beamformer verification	455/67.1 6	
8	US 20040160921 A1	20040819	19	Data transmission method and equipment	370/335	370/342
9	US 20040146123 A1	20040729	12	Equalization in orthogonal frequency domain multiplexing	375/329	
10	US 20040095907 A1	20040520	98	Method and apparatus for optimization of wireless multipoint electromagnetic communication networks	370/334	370/400
11	US 20040091026 A1	20040513	22	Circuit for detecting a shifted frequency, a method for detecting a shifted frequency and portable communication apparatus	375/148	

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1	Alamouti, Siavash et al.
2	Alexander, Paul Dean et al.
3	Kim, Sung-jin et al.
4	Shattil, Steve J.
5	Lim, Young-Seok
6	Wang, Hanching G. et al.
7	Dabak, Anand G. et al.
8	Kaipainen, Yrjo et al.
9	Lai, Yhean-Sen
10	Agee, Brian G. et al.
11	Nakayama, Takashi

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12	US 20040077378 A1	20040422	22	Adaptive transmit antenna diversity apparatus and method in a mobile communication system	455/562.1	455/101; 455/575.7
13	US 20040067739 A1	20040408	13	Space-time transmit diversity (STTD) for multiple antennas in radio communications	455/101	
14	US 20040002364 A1	20040101	36	Transmitting and receiving methods	455/562.1	455/550.1; 455/553.1; 455/575.7; 455/95
15	US 20030231700 A1	20031218	148	Vertical adaptive antenna array for a discrete multitone spread spectrum communications system	375/144	
16	US 20030220103 A1	20031127	34	Mobile communication apparatus with multiple transmission and reception antennas and mobile communication method therefor	455/422.1	455/561; 455/562.1
17	US 20030134605 A1	20030717	31	Mobile communication apparatus with multiple transmission and reception antennas and mobile communication method therefor	455/101	455/561
18	US 20030099216 A1	20030529	15	Method and apparatus for estimation of phase offset between communication channels	370/335	370/342
19	US 20030073410 A1	20030417	19	Data transmission method and radio system	455/69	455/103
20	US 20030068983 A1	20030410	62	Mobile communication apparatus with antenna array and mobile communication method therefor	455/69	455/561
21	US 20030008623 A1	20030109	28	Receiving Apparatus and Transmitting Apparatus	455/70	455/502
22	US 20020177465 A1	20021128	26	Multi-mode satellite and terrestrial communication device	455/552.1	

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12	Kim, Hung-Kee et al.
13	Sim, Dong-Hi et al.
14	Trikkonen, Olav et al.
15	Alamouti, Siavash et al.
16	Kim, Sung-jin et al.
17	Kim, Sung-Jin et al.
18	Nilsson, Johan et al.
19	Hottinen, Ari et al.
20	Kim, Sung-Jin et al.
21	Uesugi, Mitsuru
22	Robinett, Robert L.

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23	US 20020159506 A1	20021031	148	Vertical adaptive antenna array for a discrete multitone spread spectrum communications system	375/147	
24	US 20020150070 A1	20021017	25	Method and apparatus for using frequency diversity to separate wireless communication signals	370/342	
25	US 20020150065 A1	20021017	35	Communications systems	370/334	370/342
26	US 20020122465 A1	20020905	179	Highly bandwidth-efficient communications	375/141	
27	US 20020086707 A1	20020704	16	Wireless communication system using block filtering and fast equalization-demodulation and method of operation	455/561	370/321; 370/326; 375/229
28	US 20020034191 A1	20020321	103	Method and apparatus for transmitting and receiving signals having a carrier interferometry architecture	370/464	
29	US 20020018530 A1	20020214	17	Transmission antenna diversity method, and base station apparatus and mobile station apparatus therefor in mobile communication system	375/267	375/299; 375/347
30	US 20010028675 A1	20011011	20	Integrated beamforming/rake/mud CDMA receiver architecture	375/143	
31	US 6836507 B1	20041228	22	Symbol synchronizer for software defined communications system signal combiner	375/150	375/152
32	US 6831943 B1	20041214	27	Code division multiple access wireless system with closed loop mode using ninety degree phase rotation and beamformer verification	375/147	375/149
33	US 6782039 B2	20040824	145	Vertical adaptive antenna array for a discrete multitone spread spectrum communications system	375/147	375/150; 375/347
34	US 6714760 B2	20040330	24	Multi-mode satellite and terrestrial communication device	455/3.02	455/69; 455/78

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23	Alamouti, Siavash et al.
24	Shattil, Steve J.
25	Ponnekanti, Seshaiah
26	Agee, Brian G. et al.
27	Struhsaker, Paul F. et al.
28	Shattil, Steve J.
29	Kim, Sung-jin et al.
30	Bierly, Scott et al.
31	Gifford; Carl Steven et al.
32	Dabak; Anand G. et al.
33	Alamouti; Siavash et al.
34	Robinett; Robert L.

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35	US 6621851 B1	20030916	180	Priority messaging method for a discrete multitone spread spectrum communications system	375/130	370/242; 375/135
36	US 6611755 B1	20030826	110	Vehicle tracking, communication and fleet management system	701/213	340/438; 340/439; 455/12.1; 455/521; 455/526; 701/27; 701/35
37	US 6600776 B1	20030729	144	Vertical adaptive antenna array for a discrete multitone spread spectrum communications system	375/147	375/150; 375/349
38	US 6584144 B2	20030624	143	Vertical adaptive antenna array for a discrete multitone spread spectrum communications system	375/147	375/150; 375/347
39	US 6510175 B1	20030121	51	In-band on-channel digital broadcasting	375/216	455/143
40	US 6480522 B1	20021112	179	Method of polling second stations for functional quality and maintenance data in a discrete multitone spread spectrum communications system	375/130	370/242; 375/135
41	US 6434375 B1	20020813	16	Smart antenna with no phase calibration for CDMA reverse link	455/276.1	370/342; 370/479; 375/144; 375/350; 455/272; 455/273; 455/278.1; ; 455/562.1; ; 455/62

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35	Agee; Brian G. et al.
36	Coffee; John R. et al.
37	Alamouti; Siavash et al.
38	Alamouti; Siavash et al.
39	Hunsinger; Billie J. et al.
40	Hoole; Elliott et al.
41	Chulajata; Tatcha et al.

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42	US 6370182 B2	20020409	19	Integrated beamforming/rake/mud CDMA receiver architecture	375/140	370/335; 370/336; 370/441; 370/442; 375/147; 375/260; 375/343
43	US 6359923 B1	20020319	244	Highly bandwidth efficient communications	375/130	370/342; 375/135; 375/136
44	US 6347234 B1	20020212	28	Practical space-time radio method for CDMA communication capacity enhancement	455/562.1	455/550.1
45	US 6301294 B1	20011009	64	Spread spectrum communication device	375/152	375/150
46	US 6204813 B1	20010320	14	Local area multiple object tracking system	342/463	375/130
47	US 6161209 A	20001212	93	Joint detector for multiple coded digital signals	714/780	375/262; 375/341; 714/746; 714/786; 714/795
48	US 6049705 A	20000411	13	Diversity for mobile terminals	455/277.1	455/575.1
49	US 5982825 A	19991109	14	Method and apparatus for cancelling interference jamming in digital radio transmission	375/347	370/342; 370/479; 375/144; 375/267; 375/349; 455/101
50	US 5870668 A	19990209	62	Amplifier having distortion compensation and base station for radio communication using the same	455/126	455/295
51	US 5850415 A	19981215	48	In-band on-channel digital broadcasting	375/216	455/143; 455/74

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42	Bierly; Scott et al.
43	Agee; Brian G. et al.
44	Scherzer; Shimon B.
45	Hara; Keita et al.
46	Wadell; Brian C. et al.
47	Moher; Michael I.
48	Xue; Hongxi
49	Tsujimoto; Ichiro
50	Takano; Takeshi et al.
51	Hunsinger; Billie J. et al.

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52	US 5818385 A	19981006	58	Antenna system and method	342/372	455/419; 455/440; 455/456.6
53	US 5757854 A	19980526	47	In-band on-channel digital broadcasting	375/260	370/500; 370/527; 375/269; 375/270; 375/285
54	US 5710762 A	19980120	10	Frame structure having non- symmetrical slot assignments for mobile communications	370/280	370/336; 370/345; 455/450
55	US 5654979 A	19970805	34	Cell site demodulation architecture for a spread spectrum multiple access communication systems	375/142	370/342; 375/150
56	US 5541955 A	19960730	67	Adaptive data rate modem	375/222	375/265; 375/376; 375/377
57	US 5483557 A	19960109	19	Channel equalisation in particular for fading channels	375/349	375/229; 375/233
58	US 5465396 A	19951107	48	In-band on-channel digital broadcasting	455/61	375/232; 375/270; 455/102; 455/143; 455/202; 455/65
59	US 5444696 A	19950822	10	Frame structure using consecutive slot assignments for mobile communications	370/337	370/280
60	US 5388126 A	19950207	17	Baseband signal processor for a microwave radio receiver	375/364	375/285; 375/343; 375/365; 708/425; 714/798
61	US 5379046 A	19950103	20	Interference wave canceller	342/378	455/278.1 , 455/303; 455/65

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52	Bartholomew; Darin E.
53	Hunsinger; Billie J. et al.
54	Petranovich; James E.
55	Levin; Jeffrey A. et al.
56	Jacobsmeier; Jay M.
57	Webb; William T.
58	Hunsinger; Billie J. et al.
59	Petranovich; James E.
60	Rypinski; Chandos A. et al.
61	Tsujimoto; Ichiro

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62	US 5335359 A	19940802	11	Diversity receiver using matched filter and decision feedback equalizer	455/506	375/347; 455/136; 455/138; 455/140; 455/65
63	US 4805229 A	19890214	9	Diversity combiner	455/138	455/137; 455/276.1
64	US 4670906 A	19870602	23	Data communications system transmitter selection method and apparatus	455/525	
65	US 4619002 A	19861021	19	Self-calibrating signal strength detector	455/226.2	375/317; 455/226.4; 455/234.1; 455/254
66	US 4397036 A	19830802	11	Diversity system	455/137	375/347; 455/141
67	US 4271525 A	19810602	11	Adaptive diversity receiver for digital communications	375/232	375/233; 375/347

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62	Tsujimoto; Ichiro et al.
63	Mobley; J. Graham
64	Thro; Stuart W.
65	Thro; Stuart W.
66	Hirade; Kenkichi et al.
67	Watanabe; Kojiro